



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,450	11/14/2003	Oscar E. Agazzi	13449US05	9631
23446	7590	05/26/2005	EXAMINER	
MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			GHEBRETINSAE, TEMESGHEN	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. ☒

10/713,450

Applicant(s)

AGAZZI, OSCAR E.

Examiner

Temesghen Ghebretinsae

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-33 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

1. It would be of great assistance to the Office if all incoming papers pertaining to a filed application carried the following items:

1. Application number (checked for accuracy, including series code and serial no.).
2. Group art unit number (copied from most recent Office communication).
3. Filing date.
4. Name of the examiner who prepared the most recent Office action.
5. Title of invention.
6. Confirmation number (See MPEP § 503).

Claim Objections

2. Claims 24 and 32 are objected to because of the following informalities:

In claim 24 line 5, "**the input**" should be deleted and **---the convolutional coder---** should be added.

In claim 24, line 6, "**input**" should be deleted and **---convolutionally coded---** should be added.

In claim 24, line 7, the word **—fast—** should be added after the word inverse.

In claim 24, line 11, the word "**outputs**" should be deleted and the word **----values---** should be added.

In claim 32, line 6, the word **—fast---** should be added after the word inverse.

Appropriate correction is required.

Specification

3. The disclosure is objected to because of the following informalities: in the specification page 24 and page 25 "**rate 5/4 convolutional coder**" should be **----rate**

Art Unit: 2637

4/5 convolutional coder. In specification page 25, line 30, the word "**Inverse**" should be deleted and the word **---Fast---** should be added.

Appropriate correction is required.

Allowable Subject Matter

4. This application is in condition for allowance except for the following formal matters:

See above objections.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Allowable Subject Matter

5. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to anticipate or render obvious the claimed an apparatus for transmitting data on a fiber channel the apparatus comprising: a convolutional coder *in combination with a plurality of symbol encoders that accept a portion of the signal received by convolutional coder, and encode the convolutionally coded into a symbol (S) and a complex conjugate of the symbol (S*); a 32-inverse fast Fourier Transformer that receives S and S* signals and provides a digital output signals; a plurality of D/A converters for accepting the digital outputs from the 32-IFFT and for converting the accepted digital value to an analog value; and an analog multiplexer that samples the analog outputs from the plurality of digital to analog converters and*

combines them into an interleaved signal having successive values representative of the output of the plurality of digital to analog converters in the manner and complexity explicitly claimed in claim 24; and

an apparatus for receiving data on a fiber channel the apparatus comprising: an input that accepts an interleaved signal comprising a plurality of discrete successive values; a plurality of sample and hold circuits that accept the interleaved signal and extract a sample comprising a discrete value; a plurality of analog to digital converters that convert the discrete values from the plurality of sample and hold circuits to a plurality of digital values; *in combination with a 32 -Fast Fourier Transform circuit that accepts said plurality of values from the plurality of analog to digital converters and converts said values into symbols (S) and complex conjugates of the symbols (S*); A plurality of trellis decoders that accept said symbols (S) and said complex conjugates of the symbols (S*) and produced an uncoded output; and an interface which accepts the outputs of said plurality of trellis decoders and combines them into a digital signal in the manner and complexity explicitly claimed in claim 25.*

Conclusion

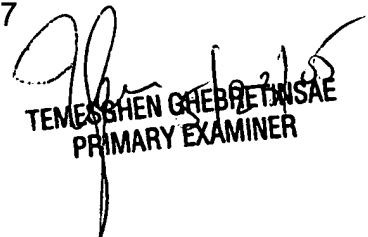
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,249,543 and 4,914,699 are cited to show an apparatus comprising convolutional coder, symbol encoder, IFFT and D/A.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temesghen Ghebretinsae whose telephone number is 571-272-3017. The examiner can normally be reached on Monday-Friday from 8 to 6. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on 571-272-2899. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Temesghen Ghebretinsae
Primary Examiner
Art Unit 2637



TEMESGHEN GHEBRETINSAE
PRIMARY EXAMINER

T.G.

5/23/05.